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To: United States Department of Commerce
United States Patent and Trademark Office

Reference Patent Application No. 09/812,073

As an unsigned but named inventor of this patent application I would like to make my position of record.

Most of the claims in this application are a result of the mechanical design work that I did in the confines of my home while in the employment of Xantrex. As a stockholder in Xantrex it is in my best interest for them to acquire valid and worthy patents. This product, although a very well executed design, does not in my opinion qualify as anything new or patentable.

There are too many claims in the application to fully address here, but I will attempt to convey the thought process that I used during the design phase of the project.

Claim 1. A metal base with a plastic top is a very common way to design and house electronics. My toaster would almost qualify for this. The fact that it is sealed was a goal to fit a harsh environment. The UL inspector in charge of UL458 informed me that he had previously approved an inverter that was intended to be mounted under the hood of a vehicle. This inverter was sealed in one form or another and was designed and tested to withstand the extremes of that environment. The claim that there are provisions inside the enclosure to mount the electronics is silly. I couldn't just throw parts inside of an enclosure and let them rattle around. The fact that I decided to use a casting and injection molded plastic allowed me to build in certain features to accommodate the electronics. This is the type of design I have been doing for 30 years. It is not unique in any respect.

Claim 2. Venting of the enclosure is required on this type of enclosure used in a condensing environment. I spent ten years designing military power supplies that all had vents of one form or another. It was this military power supply experience that taught me about venting.

Claim 4. The Gortex membrane referred to here will not work. Gortex will not pass liquid. The design for the resilient seal covering a drain opening was copied from my respirator that I use when spray painting. They are available at Home Depot. Nothing unique here.

13. All inverters use a plurality of switching devices. The larger the inverter, the more used. The fact that this device uses enough to negate the need for a heatsink is nothing new. Engineers evaluate the amount of "fets" versus heatsink area, versus efficiency on every power electronics product made. Adding more fets means less heatsink required, and eventually negates the need for a heatsink at all. I have used this technique before.

15. Similar to claim 13, the use of an oversized transformer was required due to the lack of outside cooling air. The use of a fan and outside air means the transformer can be small relative to this design. The engineer must calculate temperature rise, air flow and expected efficiency in order to determine the size required. There is nothing unique here.

Robin Gudgel